State and Regional Planning Context

Tahoe Basin Programs

- Regional Plan and Regional Transportation Plan
- Sustainable Communities Strategy
- Sustainability Action Plan
- Total Maximum Daily Load and Stormwater Plan
- Shorezone Plan
- Aquatic Invasive Species
- Strategic Public Access Investment Plan
- Lake Tahoe West Restoration Partnership
- Upper Truckee River Restoration Strategy

State Mandates

- Adaptation Plan
- AB 32 Global Warming Solutions
- SB 375 Sustainable Communities & Climate Protection
- Water Action Plan
- State Wildlife Action Plan
- Forest Carbon Plan
- Executive Order B-30-15
- Human Right to Water (AB 685)
- Bioenergy Action Plan
- Sierra Nevada Watershed Improvement Plan

existing information

updated information

Climate Adaptation Action Plan

- Downscaled, common **climate projections**
- Integrated social-ecological **vulnerability assessment** including resources, transportation, recreation, public health, and economics
- **Interagency action plan** that builds from and feeds back into existing plans & projects

Process Overview

Step 1

Assess Vulnerabilities

Project future conditions and assess the potential effects of climate change on the Basin's key socio-ecological resources and ecosystem services. *Deliverables: Downscaled Climate Change Projections for the Basin, Vulnerability Assessment*

Step 2

Improve Basin's Collective Ability to Adapt

Identify areas in local plans and programs where adaptive capacity can be integrated into decision-making and planning. Implement actions and recommendations derived from the CAAP. *Deliverables: Plan/Policy/Program Gap Analysist, Climate Adaptation Action Plan*

Step 3

Develop Common Performance Measures for Adaptation

Design monitoring protocols to gauge plan progress and the condition of vulnerable systems and ecosystem services, and practice adaptive management to meet unforeseen challenges. *Deliverable: Performance Metrics*

Plan Partners

Science & Engineering Team
University of California – Davis, University of Nevada – Reno, US Geological Survey, USFS Pacific Southwest Research Station, Desert Research Institute

State Agency Partners
CA Tahoe Conservancy, Tahoe Transportation District, Caltrans, Lahontan Regional Water Quality Control Board, CAL FIRE, CA State Parks, CA Dept. of Fish & Wildlife, CA Dept. of Conservation, Tahoe Regional Planning Agency

Peer Partners Group
US Forest Service Lake Tahoe Basin Management Unit, US Army Corps of Engineers, US Environmental Protection Agency, USDA California Climate Hub, Tahoe Fire and Fuels Team, Tahoe Resource Conservation District, Nevada Tahoe Resource Conservation District, El Dorado County, Placer County, South Tahoe Public Utility District, Tahoe City Public Utility District, League to Save Lake Tahoe, Squaw Valley Alpine Meadows, Tahoe Rim Trail Association, Tahoe Lakefront Owners Association, Sierra Business Council, and Sierra Nevada Alliance

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Catalyst ENVIRONMENTAL SOLUTIONS

CALIFORNIA TAHOE CONSERVANCY

Enhancing the Tahoe Basin's Ability to Adapt to Climate Change

Along with state, federal, non-profit, and business partners, The California Tahoe Conservancy is collaboratively developing an interagency Climate Adaptation Action Plan (CAAP) for the Lake Tahoe Basin.

The Plan has three concurrent goals:

Goals

1. **Inform** and increase the awareness of public agencies, stakeholders, and local communities on the anticipated impacts of climate change, and of the public and private actions that will build resilience to future climate impacts.
2. **Align** public and private efforts to take climate change into account in planning and investment decisions.
3. **Enhance** the Basin's resilience to climate change – the ability of its communities, resources, assets and landscape to withstand and adapt climate-amplified disturbances and extreme events.

Climate change poses a major threat to the Lake Tahoe Basin. From the famed clarity of Lake Tahoe, to world-class winter snow resorts, to enjoyment of hiking and biking and everything in-between. The CAAP will inform climate-smart action: synthesize the growing scientific literature on the potential impacts of climate change on the Basin; identify the natural resources, communities, and infrastructure most at risk; and, provide a framework for integrating climate resilience into the Basin's planning and investment programs.

Guiding Principles

Seek Alignment Across Jurisdictions

The CAAP will develop a common set of more precise, reliable climate projections to inform future updates of regional planning documents and decision-making processes, and to help guide future public and private investments.

Protect Vulnerable Resources, Assets, and Communities

Drawing from a dedicated team of scientists and engineers, the CAAP will identify the natural resources, economic assets, and local communities most at risk from a changing climate, and make recommendations to improve their resiliency and safeguard our future.

Provide Multiple Benefits

The CAAP will identify actions that will both build climate preparedness and reduce GHG emissions, and that will provide environmental, economic, and social benefits to the Lake Tahoe basin.

Expected Climate Change Impacts and Implications for the Basin

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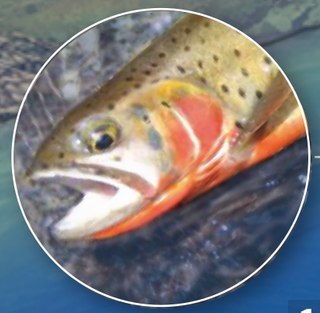
Fallen Leaf Lake

Mt Tallac

7

Emerald Bay

Tahoe Keys



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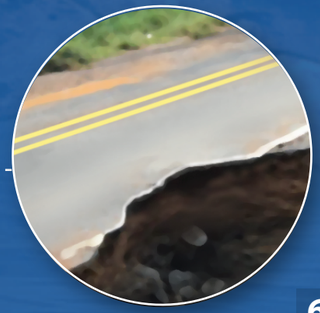

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1 Native Species

Impact: Some native species will decline or be extirpated

Implication: Suitable habitat for many species may shrink, persistence for some is uncertain; increase of invasive species

2 Forests

Impact: Larger seasonal water deficits will stress trees

Implication: Increased wildfire, pest outbreaks, and spread of invasive species; shifts and changes in biological diversity

3 Lake Tahoe

Impact: Warmer lake temperatures and lower lake levels

Implication: Less mixing of cool and warm water leading to nutrient release, altered habitat and decreasing water clarity; increased spread of invasive species

4 Streams

Impact: Increased flooding in high precipitation years and change in timing of seasonal runoff

Implication: Increased threat to infrastructure and increased erosion

5 Public Health and Safety

Impact: Increased amounts of high severity fires, sustained heat waves, higher smoke frequency

Implication: Serious health effects for sensitive populations; increased risk to human life and infrastructure

6 Transportation

Impact: Increased flooding of roads, erosion, and risk of mudslides and avalanches

Implication: Increased safety hazards, infrastructure damage, and communications and electrical outages

7 Recreation and Tourism

Impact: Less ski days and boating days during drought years; decreased summer tourism due to high smoke events from wildfire

Implication: Stress on local economy due to decreased summer and winter tourism